RadioShack®
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360° Laser Radar Detector

with VG-2 Guard

SWS
safety warning system

Owner's Manual
Please read before using this equipment.

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❒ Features

Your RadioShack 360° Laser/Radar Detector can alert you to all known police traffic radar and laser systems with its distinct visual and audio alerts. It receives X-, K-, and Ka-band radar signals, and detects both the instant-on and laser systems many police departments use to measure vehicle speed.

Your detector can also give you advance warning of potential road hazards by detecting signals from transmitters that broadcast Safety Warning System alerts.

Note: Before reading this Owner's Manual read the supplied booklet *Questions and Answers About Vehicle Speed Detection* to familiarize yourself with the terms.

Your detector's features include:

Electronic Compass — provides accurate heading information with alphanumeric display and **LED** panel.

360° Detection — detects laser signals from all around your vehicle.

Ultralyte, X-, K-, Ka-Band, and Laser Signal Detection — warns you when it detects signals from traffic radar or laser devices. Different tones and visual indicators let you know the type of signal received.

Safety Warning System Detection — alerts you to the presence of potential road hazards and emergency vehicles signaled by a Safety Warning System transmission.

VG-2 Protection — makes your detector invisible to the VG-2 radar-detector when it senses VG-2 operation.

City/Highway Modes — let you minimize alerts when you are in areas that have false radar sources.

City/Highway Selector and City/Highway Indicator — displays the mode currently selected.

FAST® (False Alert Suppression Technology) — helps prevent false alarms caused by non-traffic radar sources.

Tutorial Mode — helps you learn to recognize the detector's tones and displays.

Memory Retention —holds settings in memory when you turn off power.

Instant On or Pulse Radar — alerts you to sudden high level laser signals.

SAFETY WARNING SYSTEM

The Safety Warning System (SWS) is approved by the Federal Communications Commission (FCC) to operate on the 24.05–24.25 GHz band for highway safety alerting and traffic signal control purposes.

The Safety Warning System employs low-powered transmitters used by some emergency services and road crews to alert drivers to hazardous road conditions. The SWS can indicate many different emergency or hazardous conditions in the area (61 different messages are currently defined, with 3 additional for future use).

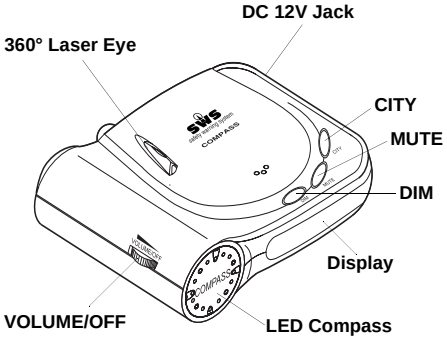
The system has the potential to dramatically decrease the occurrence of traffic accidents by increasing drivers' awareness of local road hazards. Having this safety alert compatible radar/laser detector will ensure that you can benefit from this system wherever it is in use.

Your radar/laser detector includes the following items:

- coiled power cord
- windshield bracket with suction cups
- hook and loop tape
- stand for hook and loop mounting
- spare fuse
- Booklet, *Questions and Answers About Vehicle Speed Detection*

Important: Some areas have laws regulating the use of radar detectors. Check with your local law enforcement agency about the laws in your area.

❒ *A Quick Look*



360° Laser Eye — receives incoming laser signals directed at your vehicle from all directions

DC 12V Jack — the power cord connection

DIM — controls the brightness of the display

MUTE — silences the alert tone for about 20 seconds after the current signal is lost

CITY (City/Highway) — switches between the city and highway modes

LED Compass — indicates your heading information

VOLUME/OFF — lets you turn the detector on and off and adjust the volume

Display — indicates the mode (**City**/**Highway**), type of signal, signal strength, and compass heading for detected signals.

❒ *Installation*

SELECTING A MOUNTING LOCATION

For the best performance, select a location for the detector where it has a direct view of the road. The detector's radar antenna is located at the opposite end from the display.

- Choose a location that does not block the driver's view of the road.
- Mount the detector in a level position with a clear view to both the front and rear of your vehicle and insure its view of the road is not blocked by any metal object.
- Some vehicles have InstaClear® or ElectriClear® defogging windshields, which have metal coatings that block signals. Some vehicles have a solar shield that block signals. Check your vehicle's owner's manual to see if your vehicle has any of these features. A detector installed in a vehicle with any of these features might not detect a signal.
- Since window tinting reduces the received strength of laser signals, you should not mount the detector behind any tinted glass.
- Do not mount the detector where the driver or a passenger might hit it in a sudden stop or accident.

Caution: When not in your vehicle, place your detector out of view to help discourage theft and to protect it from high temperatures.

Note: Though the detector has a 360° laser and radar detection range, radar detection is more sensitive in the front range.

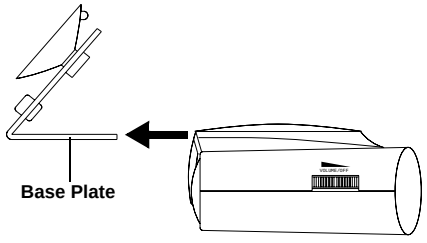
WINDSHIELD MOUNTING

The supplied suction-cup windshield bracket lets you easily mount the detector on the windshield.

Caution: Do not use the bracket in a vehicle that has a plastic coating on the windshield designed to protect passengers during an accident. If you use the bracket on this type of windshield, you might permanently mar the windshield's surface. For an alternative mounting method, see (“Hook-and-Loop Mounting” on Page 9.)

1. Clean the selected windshield area, position the bracket on the windshield, and press firmly on each suction cup to secure it in place.

2. Slide the detector onto the base plate until it snaps into place.



3. To adjust the mounting angle, remove the detector from the bracket. Then remove the bracket from the windshield and adjust it by carefully bending it.

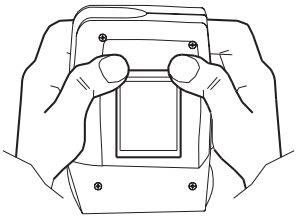
HOOK-AND-LOOP MOUNTING

In some vehicles, the dashboard may be the best location to mount the detector. For this mounting, use the supplied hook-and-loop tape as follows:

1. Use a damp cloth to clean the bottom of the stand and the dashboard. Let both surfaces dry.

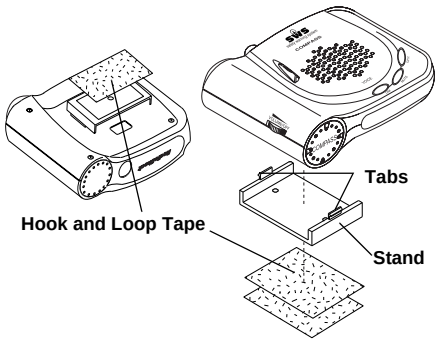
   Note: The tape's adhesive might not stick to a surface treated with vinyl cleaner or protector.

2. Attach the stand to the bottom of the detector using the two tabs on the stand. Locate the tabs over the two openings on the detectors base and press down.



   Note: After attaching the stand, to remove it, press on the tab until it clicks and remove the stand.

3. Remove the tape's paper backing and stick the tape to the bottom of the stand.



4. Remove the paper backing from the other side of the tape and press your detector onto the dashboard.

CONNECTING POWER

Caution:

- Use only the supplied power cord. If your power cord is lost or damaged, you can order a replacement cord from your local RadioShack store.
- Before plugging the power cord's cigarette-lighter plug into your vehicle's cigarette-lighter socket, make sure the plug's tip is screwed firmly onto the plug. See "Replacing the Fuse" on Page 22 for more information about the cigarette-lighter plug.

- Unplug the power cord's plug from the vehicle's cigarette-lighter socket when you turn off the ignition. This prevents the vehicle's battery from being drained if the detector is left on when the ignition is turned off.

Plug the supplied power cord's barrel plug into the detector's **DC 12V** jack. Then plug the cord's cigarette-lighter plug into your vehicle's cigarette-lighter socket.

Note: If the detector does not operate, remove the cigarette-lighter plug from your vehicle's cigarette-lighter socket and check the socket for ashes and other debris. Also, check the fuse in the cigarette-lighter plug and your vehicle's fuse block (see "Replacing the Fuse" on Page 22).

CALIBRATING THE ELECTRONIC COMPASS

Your radar detector has an electronic compass that can display eight kinds of headings:

North (**N**), East (**E**), South (**S**), West (**W**), Northeast (**NE**), Northwest (**NW**), Southeast (**SE**), and Southwest (**SW**).

Note: The detector displays the compass heading information until it picks up a signal. After the detector displays the signal, it returns to the compass display.

After installing the detector in your vehicle, you must calibrate the electronic compass before using it. Calibration separates the earth's magnetic field from other magnetic fields so that the electronic compass provides accurate heading information.

You must calibrate the detector when:

- It is being used for the first time.
- It is moved to a different location within the vehicle, or if it is removed and placed in another vehicle.
- **DISTORT** appears.

Note: You must complete the circles in less than 2 minutes. Otherwise, begin again from step1.

Follow these steps to calibrate your detector.

1. Hold down **CITY** for about 2 seconds until **CAL....** appears. **TURN** and **TWICE** flash alternately.
2. Turn the steering wheel all the way to the right or left and drive in two complete circles. Then press **CITY**. **WAIT** flashes four times.
3. If the calibration is complete, **SUCCESS!** appears. If calibration is not, the display scrolls **PLEASE CALIBRATE AGAIN... PRESS CITY-KEY**. Repeat steps 1 and 2.

After calibration, the compass heading appears.

❒ *Operation*

TURNING ON THE DETECTOR

To turn on the detector, rotate **VOLUME/OFF** toward **VOLUME** until it clicks. A tone sounds and **WELCOME** appears. After self-

testing, heading information and **HWY** appear. (See “Selecting the City and Highway Modes” on Page 14.)

To turn off the detector, rotate **VOLUME/OFF** toward **OFF** until it clicks and the display turns off.

ADJUSTING THE VOLUME

Rotate **VOLUME/OFF** toward **VOLUME** to increase volume, or toward **OFF** to decrease volume.

USING THE TUTORIAL

Use the tutorial mode to familiarize yourself with the display.

1. Hold down **DIM** and **CITY** (at the same time) then turn on the detector. **TUTORIAL** and **MODE** flash alternately.
2. To see each alert demonstrated, press **DIM**. The detector displays each alert and sounds its corresponding audio alert in the following order.

1. X-Band Alert
2. K-Band Alert
3. Ka-Band Alert
4. Laser Alert
5. Ultralyte Laser Alert
6. VG-2 Alert
7. Rock Slide Area Ahead
8. School Zone Ahead
9. Road Narrows Ahead
10. Sharp Curve Ahead
11. Pedestrian Crossing Ahead

3. To end the tutorial at any time, press **MUTE**.

OPERATION SETTINGS

Selecting the City and Highway Modes

Your detector has two operating modes: city and highway.

In city mode, the detector requires a stronger X-, K-, or Ka-band signal before it sounds or displays an alert.

Notes:

- City mode helps prevent false alerts in highly populated areas, where radar signals can bounce off surrounding structures.
- The city mode has no effect on laser alerts or instant-on radar.

The highway mode provides maximum sensitivity for open-road driving.

The detector is preset to highway mode and **HWY** appears on the display when you turn it on. To select the city mode, press **CITY**. **CTY** appears. To return to the highway mode, press **CITY** again and **HWY** appears.

Selecting Display Brightness

You can select from three levels of brightness: bright, dim, and dark. The display is preset to bright. Pressing **DIM** once reduces the display's brightness by half. Pressing **DIM** a second time reduces the display's brightness by 90%. Pressing **DIM** a third time returns display to full brightness.

Muting the Audio Alert

When the detector sounds a radar or safety alert signal, press **MUTE** to temporarily silence the detector. When you press **MUTE**, **M** appears. The detector resets **MUTE** to go off 20 seconds after the signal stops. Or, press **MUTE** again before it resets, and **M** disappears. The laser alert signal remains audible even if you press **MUTE**.

Selecting VG-2 Mode

VG-2 mode is preset to off. To turn on VG-2, hold down **MUTE** until **VG2-ON** appears. To turn VG-2 off, hold down **MUTE** until **VG2-OFF** appears.

Note: If there is another detector nearby, you might receive false signals. To avoid receiving such signals, turn VG-2 off.

RECEIVING AND IDENTIFYING RADAR, LASER, AND SAFETY ALERT SIGNALS

When your detector senses a radar signal, **X**, **K**, or **KA** appears. An alert tone for the type of band detected sounds, and the display shows the signal strength in numeric form.

Note: The closer you get to the source of the radar, the higher the signal strength number.

When your detector senses an instant-on signal, **INSTANT - ON** appears and the instant-on alert tone sounds.

When your detector senses a laser signal, **LASER** flashes and the laser alert tone sounds.

When your detector senses an Ultralyte laser signal, **ULTRA-LYTE LASER** scrolls and the Ultralyte laser alert tone sounds.

When your detector senses a VG-2 signal, **VG-2** appears and the VG-2 alert tone sounds.

When your detector senses a SWS signal, a message describing the detected signal appears and an alert tone sounds.

SWS Categories and Messages

Category 1: Highway Construction Maintenance
WORK ZONE AHEAD
ROAD CLOSED AHEAD/FOLLOW DETOUR
BRIDGE CLOSED AHEAD/FOLLOW DETOUR
HIGHWAY WORK CREW AHEAD
UTILITY WORK CREW AHEAD
ALL TRAFFIC FOLLOW DETOUR AHEAD
ALL TRUCKS FOLLOW DETOUR AHEAD
ALL TRAFFIC EXIT AHEAD
RIGHT LANE CLOSED AHEAD
CENTER LANE CLOSED AHEAD
LEFT LANE CLOSED AHEAD

Category 2: Highway Hazard Zone Advisory I
STATIONARY POLICE VEHICLE AHEAD
TRAIN APPROACHING/AT CROSSING
LOW OVERPASS AHEAD
DRAW BRIDGE UP
OBSERVE BRIDGE WEIGHT LIMIT
ROCK SLIDE AHEAD
SCHOOL ZONE AHEAD
ROAD NARROWS AHEAD
SHARP CURVE AHEAD
PEDESTRIAN CROSSING AHEAD

Category 3: Highway Hazard Zone Advisory II
DEER/MOOSE CROSSING
BLIND/DEAF CHILD AHEAD
STEEP GRADE AHEAD/TRUCK USE LOW GEAR
ACCIDENT AHEAD
POOR ROAD SURFACE AHEAD
SCHOOL BUS LOADING/UNLOADING
NO PASSING ZONE
DANGEROUS INTERSECTION AHEAD
STATIONARY EMERGENCY VEHICLE AHEAD

Category 4: Weather Related Hazards
HIGH WIND AHEAD
SEVERE WEATHER AHEAD
HEAVY FOG AHEAD
HIGH WATER/FLOODING AHEAD
ICE ON BRIDGE AHEAD
ICE ON ROAD AHEAD
BLOWING DUST AHEAD
BLOWING SAND AHEAD
BLOWING SNOW WHITE OUT AHEAD

Category 5: Travel Information/Convenience I
REST AREA AHEAD
REST AREA WITH SERVICE AHEAD
24 HOUR FUEL SERVICE AHEAD
INSPECTION STATION OPEN
INSPECTION STATION CLOSED
REDUCE SPEED AREA AHEAD
SPEED LIMIT ENFORCED
HAZARDOUS MATERIALS EXIT AHEAD
CONGESTION AHEAD/EXPECT DELAY
EXPECT 10 MINUTE DELAY

Category 6: Travel Information/Convenience II
EXPECT 20 MINUTE DELAY
EXPECT 30 MINUTE DELAY
EXPECT 1 HOUR DELAY
TRAFFIC ALERT/TURN ON AM RADIO
PAY TOLL AHEAD
TRUCKS EXIT RIGHT
TRUCKS EXIT LEFT

Category 7: Fast/Slow Moving Vehicles
EMERGENCY VEHICLE IN TRANSIT
POLICE IN PURSUIT
OVERSIZED VEHICLE IN TRANSIT
SLOW MOVING VEHICLE

❒ Troubleshooting

If you have problems operating your detector, these suggestions might help. If you cannot solve the problem after trying these suggestions, take your detector to your local RadioShack store for assistance.

Problem	Suggestion
The detector does not turn on.	Be sure all power connections are secure.
	The cigarette-lighter socket might be dirty. Clean it with fine emery cloth to ensure a good, clean connection.
	Check the fuse in the power cord's cigarette-lighter plug. See "Replacing the Fuse" on Page 22.
	Check the fuse that controls power to your vehicle's cigarette-lighter socket. See your vehicle's owner's manual.
Caution: Do not place any metal object other than the cigarette lighter or cigarette-lighter plug in the cigarette-lighter socket. Doing so could blow a fuse in your vehicle or cause the metal object to become very hot.	
The detector gives a false alert when you use vehicle accessories such as power windows, motorized mirrors, brakes, and so on.	Check the vehicle's electrical system for loose connections, including the main battery cable and alternator connections.
	Install a filter capacitor 1000 µF, 35 Volts, on the back of the cigarette-lighter socket, across the power connections.

Problem	Suggestion
The detector performs the self-test, but does not respond to radar signals when you see a police car.	A police car might not be equipped with radar (see the supplied booklet, *Questions and Answers About Vehicle Speed Detection*).
	Police might be using VASCAR-type speed detection (see the supplied booklet, *Questions and Answers About Vehicle Speed Detection*).
The detector has poor laser detection range.	Be sure the laser detection lens is not blocked.
	Be sure the detector is properly mounted. See “Selecting a Mounting Location” on Page 7.
	Use lens-cleaning solution to clean the laser detection lens.

❒ *Care and Maintenance*

To enjoy your RadioShack 360° Laser/Radar Detector for a long time:

- Keep the detector dry. If it gets wet, wipe it dry immediately.
- Use and store the detector only in normal temperature environments.
- Handle the detector gently and carefully. Do not drop it.
- Keep the detector away from dust and dirt.
- Wipe the detector with a damp cloth occasionally to keep it looking new.

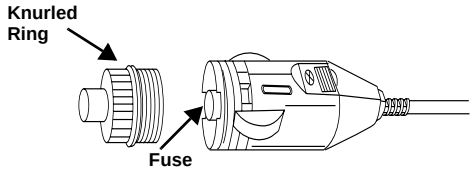
Modifying or tampering with the detector's internal components can cause a malfunction and might invalidate its warranty. If your detector is not performing as it should, take it to your local RadioShack store for assistance.

REPLACING THE FUSE

If the detector stops operating, follow these steps to check the fuse in the power cord's cigarette-lighter plug and replace it with a 2-amp, $1^1/_4 \times {}^1/_4$ fast-acting fuse.

Caution: Using a fuse that does not meet the requirements above can damage your detector, the power cable, or the vehicle's electrical system.

1. Turn the knurled ring end plug counter-clockwise on the cigarette-lighter adapter to unscrew it.



   Caution: If you must use pliers to loosen the ring, be careful not to crush the ring or the metal tip inside the ring.

2. Remove the ring and tip from the power cord's cigarette lighter plug, then remove the old fuse.

   Note: Take care not to lose the ring, tip, or the spring inside the plug.

3. Check the fuse. If it has blown, replace it.

4. Replace the metal tip inside the ring, making sure the spring is intact, then place the fuse inside the adapter and screw the ring back onto the adapter. Make sure the tip is visible when you reassemble the adapter.

Caution: Never use pliers or other tools to retighten the ring on the cigarette-lighter plug.

Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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